R & D CATALOG FORM

DATE: 18 May 1965

1. PROJECT TITLE/CODE NAME
Wide-Scan, High-Power Stereoviewer

2. SHORT PROJECT DESCRIPTION
The development of an integral mount, light table and high-intensity light source for a high-power, wide field, interchangeable rhomboid stereoscope (contd)

25X1

3. CONTRACTOR NAME
25X1

4. LOCATION OF CONTRACTOR

5. CLASS OF CONTRACTOR
Manufacturer

6. TYPE OF CONTRACT
CPFF

7. FUNDS
FY 19 $
25X1
FY 1966 $
FY 19 $

8. REQUISITION NO.
NA

9. BUDGET PROJECT NO.
NP-DV-3 (Former NP-V-13)

10. EFFECTIVE CONTRACT DATE *(Begin - end)*
July 1965 - April 1966

11. SECURITY CLASS.
A.A. - Confidential
T. - Unclassified
W. - Unclassified

12. RESPONSIBLE DIRECTORATE/OFFICE/PROJECT OFFICER TELEPHONE EXTENSION
25X1
DDI/NPIC/P&DS/

13. REQUIREMENT/AUTHORITY
As the resolution of future systems increases the requirement for ultra-high resolution viewing systems becomes more stringent. This project combines an existing high resolution stereoscope with the necessary light sources, film (contd)

14. TYPE OF WORK TO BE DONE
This project is an engineering development directed toward the design, fabrication, test and evaluation of a prototype high resolution viewer utilizing an existing microstereoscope.

15. CATEGORIES OF EFFORT

MAJOR CATEGORY	SUB-CATEGORIES
Direct Viewing Systems	Visual
	Interpretation/analysis

16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC.
This project should result in an engineering prototype, monthly progress reports and an instruction manual.

17. SUPPORTING OR RELATED CONTRACTS *(Agency & Other)*/COORDINATION
By virtue of contacts throughout industry and the Intelligence Community, it appears that no equivalent item is either in existence or under development. This development is of potential interest to PAG, PID and TID.

18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT *(Continue on additional page if required)*

25X1
Current system materials exceed the capabilities of the [redacted] Zoom 70 and [redacted] M-5 microstereoscopes. As a consequence, it has been manditory to actively investigate and develop ultra-high resolution microscopes; the Interchangeable Rhomboid (Versatile) Stereoscope is such an instrument. It was originally developed for the Navy (NRTSC) by [redacted] and NPIC purchased the second prototype for evaluation purposes. While it is a superior instrument, it has a poorly designed mount and requires a specially designed light table, high-intensity (contd)

25X1
25X1

19. APPROVED BY AND DATE

OFFICE	DEPUTY DIRECTOR	DDCI

FORM 11-64 2338

(1-13)

2. fabricated under a previous contract.

13. transports and stereoscope mount required to produce an effective viewer. This project is in direct response to requirements of NPIC/TID, CIA/PID and NPIC/PAG.

18. light source, and superior film transport system to become an operationally practical viewer. The following specifications describe an instrument that will satisfy these requirements.

1. This table will provide two parallel 11 x 20 inches illuminated areas for use in viewing dual or single rolls of film of any size between 70mm and 9½ inches. These viewing areas will be side-by-side with the long axes aligned toward, and away, from the operator. They will be mounted horizontally and will be built into an elevating table. In addition, a mounti will be incorporated to rigidly support the microscope at the correct height above the light table surface. Provision will be made for this microscope to translate ± 6-inches in x and ± 3-inches in y -- these distances refer to displacement of the center of the scope.

2. General Illumination. To facilitate general viewing at the lower magnifications and for small image location, both of the 10-inches by 20-inches glass formats will be illuminated by cold cathode light grids. The intensity of illumination of each 10-inches by 20-inches area will be independently and continuously variable through 15% - 100% without "flicker". Adjustable shades will be provided to mask out all of the viewing surface not actually covered by film.

3. High-intensity Illumination. Condensed illumination transmitted through two assemblies, which are positioned in the air space between the light grids and the clear glass viewing surface, through 1/8 inch diameter fiber optic cables of sufficient length to allow each illumination assembly to track to any position in the general illumination area. These illumination assemblies will then track small cylindrical magnets attached to each rhomboid. Once the magnets are locked in place, they will track the rhomboids as the scope is translated in both "x" and "y".

At full-intensity, the high-intensity sources will provide adequate illumination for film with an average density of 2 as viewed through the stereoscope operating at 120x. Means will be provided for continuously varying illumination from 50% to 100%.

4. External Configuration. The entire light table and mount will not exceed 36-inches wide by 37-inches deep. The stereoviewer incorporates an elevating table which adjusts ± 5-inches from a normal desk height of 29-inches.

Continued...

5. Film Transport. The film transport system will accommodate up to and including 500-foot spools. All spools are located at the rear of the table. The film drives incorporate mechanical power amplifiers operating on the principle of a friction assist. This design will permit bi-directional film motion controllable from the operators end of the table -- both winding and unwinding with one set of cranks.

A clear glass, solenoid operated, pressure plate is mounted (above the Film) over each illuminated area and is raised and lowered automatically when the film is transported.

6. Controls. All operational controls will be human engineered and conveniently located and readily accessible to the operator.

Proposals were solicted from eleven contractors; selection was made from the five which responded. Of these five, [redacted] proposal was competitive in design philosophy, and by far the lowest in cost. 25X1

25X1 [redacted] Versatile Stereoscope will be furnished to the contractor as G.F.E.

This project is to be negotiated on an [redacted] Confidential basis. The proper security measures are in effect at the vendors plant as a result of other [redacted] contracts. 25X1

25X1

FOLLOWING THESE INSTRUCTIONS WILL EXPEDITE PROCESSING
1. LIMIT REQUISITIONS TO ONE PROJECT OR ITEM.
2. LIMIT REQUISITIONS TO ONE MATERIAL UNIT.
3. PUT ITEMS WITHOUT STOCK NOS. ON SEPARATE REQUISITION

3 JUN 1965

REMOVE COLLECTOR SHEET BEFORE TYPING — REPLACE AFTER TYPING

☐ SECRET ☒ CONFIDENTIAL ☐ UNCLASSIFIED

NAME OF CONTACT OFFICER	OFFICE	TELEPHONE	SIGNATURE OF APPROVING OFFICER	SIGNATURE OF TECHNICAL OFFICER
25X1	NPIC			25X1

25X1 REMA☐ Confidential Agency Association

Pending Availability of '66 Funds

BUDGET CERTIFICATION: I CERTIFY THAT COST AUTHORIZATION AND/OR FUNDS ARE AVAILABLE. CHARGE COST CENTER INDICATED IN BLOCK(S) MARKED (*) BELOW. 25X1

$ ☐

SIGNATURE OF AUTHORIZING OFFICER	DATE

REQUISITION FOR MATERIEL AND/OR SERVICES

REQ'N. DATE	REQ'N. NO.	VOU. DATE	VOU. NO.
6/3/65	5500-8507-66		

FOR PROC. OBLIGATE ALLOTMENT NO.	REQUIRED DATE AT DESTINATION (NOT REQUIRED FOR ROUTINE REQNS. ENTER DATE ONLY IF REQUIREMENT IS FIRM)	DATE PROC. ITEMS REQUIRED IN DEPOT	DATE STOCK ITEMS REQUIRED IN TRANSPORTATION	TYPE I FPA / TYPE II FPA / OTHER:
6155-4100				

* CHARGE COST CENTER NO.	ACCOUNTABILITY TO BE ASSUMED BY STATION
6155-4100	

CONSIGNEE

NPIC

25X1 ☐

REFERENCE

RECOMMENDED METHOD OF SHIPMENT (TRUCK, RAIL, SHIP, PLANE, OR POSTAL)	RECOMMENDED CHANNEL FOR SHIPMENT (COMMERCIAL, MILITARY OTHER)

MARKING INSTRUCTIONS

PACKING INSTRUCTIONS

SOURCE: PROC.	SOURCE: WHSE.	POSTED: INITIAL	POSTED: DATE

STOCK CONTROL REMARKS

3 Copies for NPIC R&D

ITEM NO.	STOCK NO.	EXP	NOMENCLATURE	SC	PRICING AND EDITING DATA
1			Development of a wide-scan, High Power Stereoviewer consisting of an integral mount, light table and high intensity light source for use with a ☐ Versatile Stereoscope in accordance with the vendor's proposal dated 26 March 1965.	1	QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
					QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
					QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
			VENDOR: ☐		QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
			Proposal in possession of ☐		QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
			APPROVED: NDD/1 2 June 1965		QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
					QUANTITY / UNIT / UNIT PRICE / EXTENSION RELEASED / ACTION / S-A-C / LOCATION
					QUANTITY / UNIT / UNIT PRICE / EXTENSION